Key Summary of Published Article

Pharmacogenomics

Employer considerations in comprehensive medication management

What are the benefits and barriers of pharmacogenomics-enriched comprehensive medication management (PGx+CMM)?

Background

Medication management is often suboptimal, which can make patients' regimens unsafe, ineffective, and costly. Pharmacogenomics—using genetic information to optimize medication selection—can be a valuable component that improves safety and effectiveness of comprehensive medication management but has not been widely implemented as such.

Considerations

Self-insured employers may want to consider some of the benefits and barriers of PGx+CMM.

Pharmacogenomics-enriched comprehensive medication management

Benefits

Better health outcomes
Improves medication adherence and efficacy; reduces adverse effects and hospitalizations

Lower costs
Cost-effective for patients, employers, and healthcare system, especially over long term

Feasible implementation
Accessible and scalable for employer setting, where barriers are more easily overcome

Barriers

Provider hesitancy
Healthcare providers lack training and feel unprepared to use pharmacogenomic data

Infrastructure fragmented
Tools for integrating pharmacogenomics into clinical workflow are absent or inadequate

Coverage limited
Health insurance plans may not cover and payers may not reimburse for testing

PGx+CMM has the potential to improve healthcare outcomes while reducing costs. Although barriers to wider clinical implementation remain, PGx+CMM programs are presently well suited for employer-sponsored settings.

1. Fragala MS, Shaman JA, Lorenz RA, et al. Role of pharmacogenomics in comprehensive medication management: Considerations for employers. *Popul Health Manag*. 2022;25(6):753-762. doi:10.1089/pop.2022.0075

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Pharmacogenomics
Employer considerations in comprehensive medication management

Article title: Role of Pharmacogenomics in Comprehensive Medication Management: Considerations for Employers

Maren S Fragala,[a] Jeffrey A Shaman,[b] Raymond A Lorenz,[a] Steven E Goldberg[a]
[a] Quest Diagnostics, Secaucus, NJ, USA; [b] Coriell Life Sciences, Philadelphia, PA, USA

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Background

- In the United States, costs due to suboptimal medication management and pharmaceutical expenditures are substantial.[1,2]
- Comprehensive medication management (CMM) programs guided by pharmacogenomics (PGx), genetic testing that can provide insights into medication response, have been shown to improve the efficacy and safety of medication regimens, thus improving healthcare outcomes.[3]
- However, implementation of PGx+CMM is lacking, in part because of limited physician adoption and coverage.
- **Objectives:** Against this backdrop and in the context of self-insured employers, the authors of a review discuss the benefits of PGx+CMM programs and the challenges posed in implementing scalable PGx+CMM.

Benefits

- Better health outcomes have been reported; PGx+CMM can improve safety, disease management, medication adherence and effectiveness, reduce adverse drug reactions, and guide medication changes across different care settings and within multidisciplinary care teams that include physicians and pharmacists.
- Lower healthcare costs were demonstrated in a recent longitudinal retrospective study on a PGx+CMM program.[2]
- Feasible implementation in a self-insured, employer-sponsored health plan may not be as hindered by provider hesitancy, fragmented infrastructure, and lack of coverage that impede PGx+CMM delivery to populations that do not participate in employer-sponsored health plans.

Barriers

- Inexperience owing to medical training that historically seldom included training on clinical use of PGx is a barrier to broader implementation of PGx+CMM; many providers feel uncomfortable ordering PGx tests, inadequately informed about PGx testing, or unsure about how to implement PGx in their practices.
- Infrastructure fragmentation impedes PGx+CMM implementation; an example is the absence of a way to handle genetic data such that it can be integrated into clinical decision support and workflows, electronic health records, and pharmacy ordering systems.
- Limited health plan coverage is one of the greatest barriers to large-scale implementation of PGx+CMM; however, payer reimbursements have improved with growing evidence supporting clinical utility.

Conclusions

- Despite challenges to implementing PGx+CMM in clinical settings, studies have demonstrated that it is feasible to the degree that it improves health outcomes and medication safety while reducing costs.
- The findings summarized in the review are relevant to self-insured, employer-sponsored health plans and support the potential for PGx+CMM programs to improve employee health and decrease costs for employers.

References

1. Tichy EM, Hoffman JM, Suda KJ, et al. *Am J Health Syst Pharm*. 2021;78(14):1294-1308. doi:10.1093/ajhp/zxab160
2. Watanabe JH, McInnis T, Hirsch JD. *Ann Pharmacother*. 2018;52(9):829-837. doi:10.1177/1060028018765159
3. Krebs K, Milani L. *Human Genomics*. 2019;13(1):39. doi:10.1186/s40246-019-0229-z